Letter to the Editor

A potential cause of the reported increase in rates of autism
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There has been a discussion on the cause(s) of the reported secular increase in rates of autism over the past few decades. Does this increase merely mean an increased recognition of the condition, or a widening of the criteria—or has the increase been, at least partially, real? Rutter\(^1\) wrote of the need for hypothesis testing-focused research or possible causal mechanisms that could lead to changes in incidence. Here I try to meet this latter need.

I have adduced very substantial quantities of data to support the hypothesis that mammalian (including human) sex ratios (proportions male) at birth are partially controlled by the hormone levels of both parents around the time of conception.\(^2\)–\(^5\)

Baron-Cohen\(^6\) hypothesized that one cause of autism is high maternal intrauterine concentrations of testosterone. If both hypotheses were correct, then sibs of autistic probands should contain an excess of brothers. I reported evidence for such an inference at a statistically significant level,\(^7\) and this finding has itself been confirmed.\(^8\)

So there is good evidence for Baron-Cohen’s hypothesis that one cause of autism is high maternal intrauterine testosterone concentration. There is good reason to suppose that over the past few decades, there has been an increase in women’s testosterone levels. Such an increase would be expected to have been associated with the rise in rates of diabetes,\(^9\)\(^,\)\(^10\) and of obesity\(^11\) in women. Thus, it seems reasonable to propose that the reported increase in rates of autism is at least partially real and due to increasing maternal intrauterine testosterone levels.

References

\(^1\) Rutter M. Commentary: fact and artefact in the secular increase in the rates of autism. *Int J Epidemiol* 2009;\(^38\): 1238–39.

\(^2\) James WH. Evidence that mammalian sex ratios at birth are partially controlled by parental hormone levels at the time of conception. *J Theor Biol* 1996;\(^180\): 271–86.

\(^3\) James WH. Further evidence that mammalian sex ratios at birth are partially controlled by parental hormone levels around the time of conception. *Hum Reprod* 2004; \(^19\): 1250–56.

\(^4\) James WH. Evidence that mammalian sex ratios at birth are partially controlled by parental hormone levels around the time of conception. *J Endocrinol* 2008; \(^198\): 3–15.

\(^5\) James WH. Further evidence for the hypothesis that parental hormone levels around the time of conception are associated with human sex ratios at birth. *J Biosoc Sci* 2008; \(^40\): 855–861.


\(^7\) James WH. Further evidence that some male-based neurodevelopmental disorders are associated with high intrauterine testosterone concentrations. *Dev Med Child Neurol* 2008; \(^50\): 15–18.


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